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## DESCRIPTION OF A NEW SUBSPECIES OF BUSH-WARBLER OF THE GENUS *CETTIA* FROM ALOR ISLAND, INDONESIA

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### ABSTRACT

Three subspecies of the Sunda Bush-Warbler *Cettia vulcania* (Blyth 1870) are recognised for the Lesser Sunda Islands, namely *Cettia vulcania vulcania* from Bali, Lombok and possibly Sumbawa; *C. v. everetti* from Timor and *C. v. kolichisi* subsp. nov. from Alor. The new subspecies differs in its smaller size and duller coloration.

### INTRODUCTION

Members of the genus *Cettia* are among the most difficult of all sylvine warblers to identify. Their dull brown plumage lacks distinctive characters that can be used to separate closely related taxa, and Wells (1982) pointed out that voice is possibly a better guide to help identify species. The Sunda Bush-Warbler *Cettia*

*vulcania* (Blyth 1870) is widely distributed through the Greater and Lesser Sunda Islands of Indonesia including: Sumatra, Borneo, Java, Bali, Lombok and Timor with an outlying population on Palawan Island, in the Philippines (Peters 1986). This species undergoes considerable geographic variation and the taxonomic status of some populations is still unresolved. Wells (1982) using sonagram



Figure 1. Map of Lesser Sunda Islands, Indonesia showing distribution of *Cettia vulcania vulcania*, *C. v. everetti* and *C. v. kolichisi*.

analysis and various morphometrical differences separated the Sunda-Wallacean *vulcania* (or at least the Java and Bali populations) as a full species from the Sino-Himalayan forms of *Cettia fortipes* (sensu Delacour 1943). The Timor population *C. v. everetti* along with the Sumatran and Palawan forms were only provisionally included with *C. vulcania* by Wells as details of their songs were unknown, a deficiency since rectified by Andrew (in Rozendaal 1987).

In April–May 1991 the Western Australian Museum in collaboration with the Museum Zoologicum Bogor carried out a vertebrate survey of Alor Island. Sunda Bush-Warblers were observed and eight specimens collected in disturbed dense undergrowth of primary forest at 650–740 m.

More recently in September 1993 P. Jepson and S. Schmitt observed Sunda Bush-Warblers in dense fern undergrowth on Gunung Tambora, Sumbawa Island (Jepson pers. comm.). This is the first record of this species for Sumbawa and the subspecific status of this population is yet to be resolved.

#### MATERIALS AND METHODS

In addition to the eight specimens (6 adults and 2 juveniles) of the new subspecies described in this paper, specimens of the following taxa were examined: *Cettia vulcania vulcania*; *Cettia v. everetti*; *Cettia ruficapilla ruficapilla*; *Cettia fortipes fortipes* and *Cettia carolinae*. Measurements were taken as fol-

lows: length of chord of flattened wing, length of tail (along a central rectrix), length of tarsus, length of entire bill to base of skull, length of exposed bill (to feathering) and maximum depth of bill.

#### LESSER SUNDA SUBSPECIES

*Cettia vulcania vulcania* (Blyth 1870).

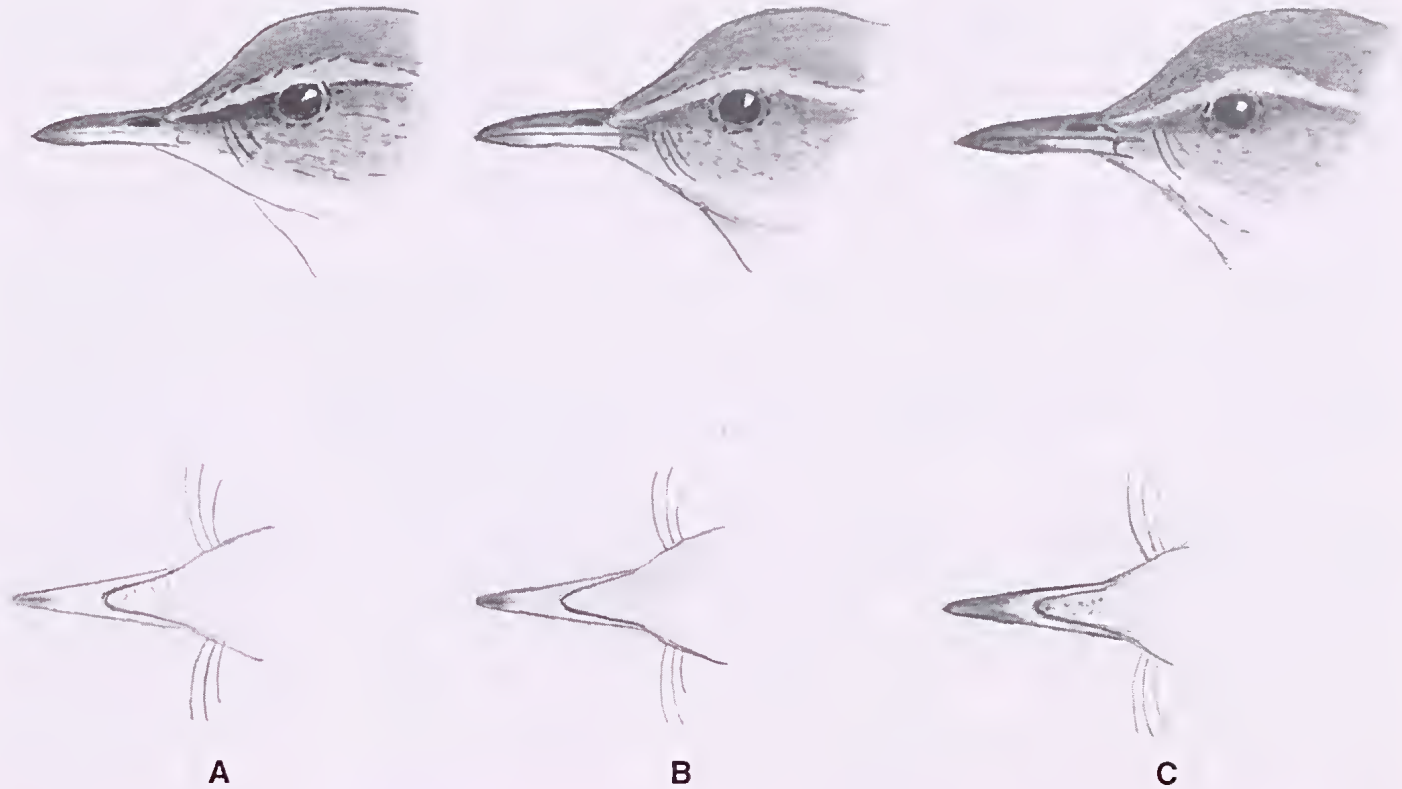
*Description.* Upperparts: forehead, crown, hindneck, back, rump and wing coverts sepia brown with slight rusty tinge; lore and small patch behind eye blackish; dull white supercillium from base of bill over eye; primaries and secondaries dark brown, slightly paler on the underside and the inner feathers with narrow whitish inner margin; tail dark brown. Underparts: cheeks and ear coverts mostly brown, chin and throat white; breast and belly white extensively washed with buffy brown (forming a breast band); flanks buffy brown.

*Distribution.* Bali and Lombok Is and recent sightings probably of this subspecies on Sumbawa Island (see Figure 1). On Lombok occurs in dense fern and nettle undergrowth at 2000–2400 m Rensch (1931).

*Status.* Resident.

*Cettia vulcania everetti* (Hartert 1898).

*Description.* Upperparts: forehead, crown, hindneck, back, rump and wing coverts brownish olive or light brownish olive, lore and small patch behind eye darker; whitish supercillium from base of



**Figure 2.** Heads of (A) *Cettia vulcania vulcania*, (B) *C. v. everetti* and (C) *C. v. kolichisi* showing facial pattern and bill proportions and bill viewed from underside (to show greater extent of dark area on *kolichisi*).

bill to beyond eye; primaries and secondaries dark brown, the inner feathers with narrow whitish inner margin; tail dark brown edged with brownish olive. Underparts: cheeks and ear coverts greyish white; breast and belly white (lacking effect of breast band); flanks whitish tinged with brownish grey (much less extensively than in nominate race).

*Distribution.* Timor from lowlands to 2300 m (see Fig. 1).

*Status.* Resident.

*Cettia vulcania kolichisi* subsp. nov.

*Holotype.* Adult female (WAM A24491), collected by R.E. Johnstone and R.A. How on 24 April 1991 at Apui, 8°15'S, 124°43'E, Alor Island, Indonesia at about 700 m. The bird was attending two fledged young.

*Diagnosis.* Differs from both *Cettia v. vulcania* and *C. v. everetti* in its smaller size (see Table 1); duller darker brown upperparts (lacking the rusty tones of the nominate form and the olive tones of *everetti*); dull whitish underparts (similar to *everetti*); and more contrasting pale edging to inner primaries and secondaries when viewed from below. Appears to be closer to *everetti* in that the underparts are much less invaded by brown tones (i.e. lacks obvious breast band); the white inner vanes and underside of the primaries is also more conspicuous than in the nominate race; and the tail feathers are less broad. The bill is also proportionately longer, finer and has a more extensive dark zone on the lower mandible than *vulcania* or *everetti* (Figure 2).

*Description.* Adult male (one specimen), upperparts: forehead, crown, hindneck, back and wing coverts dark greyish brown; lore similar; ill defined greyish white superciliary stripe; inner primaries and secondaries dark brown with well defined pale edge to inner margin (visible from below); tail (badly worn) dark brown. Underparts: dusky white, tinged with pale brownish grey on flanks and thighs. Total length 120 mm, weight 8.2 g. Iris brown, bill upper mandible dark brown, lower mandible pale whitish basally, dark brown distally; gape yellowish; legs pale brown.

Adult female (one specimen). Differs from male in its slightly smaller size, total length 110 mm, weight 8 g.

Four spirit specimens (unsexed), weight 9.4–11 g. Coloration as above.

Juvenile (2 specimens). Length 89 mm, weight 8.2 g. Upperparts: dark olive brown; ill defined yellowish superciliary stripe. Underparts: chin and throat yellow; centre of breast and belly yellow, sides of breast and flanks dark olive buff. Iris brown; bill, upper mandible brown, lower mandible pinkish; mouth orange; legs pinkish brown.

*Distribution.* Confined to Alor Island (see Fig. 1) at about 600–750 m. in dense understorey with shrubs, vines, the composite *Wedelia biflura* and 3 m tall grass.

*Derivation of name.* After Perth ornithologist Mr Nicholas Kolichis in appreciation of his financial assistance for fieldwork in Indonesia and Australia.



Table 1. Measurements (mm) and weight (g) of *Cettia vulcania* specimens from Indonesia.

POPULATION	SEX	WING	ENTIRE CULMEN	EXPOSED CULMEN	BILL DEPTH	TAIL	TARSUS	MIDDLE TOE AND CLAW	TOTAL LENGTH	WEIGHT
<i>C. v. vulcania</i> Java and Lombok Is.	♂(1)	55	15	9.5	3.2	50	22	16		
	♀(1)	49	16	10.0	3.5	45	22	15		
<i>C. v. everetti</i> Timor I.	♂(2)	53	14, 15	11.0	2.9, 3.0	52, 53	21, 22	14, 15		
	♀(2)	49, 50	15	9.0, 10.0	2.6, 3.0	48, 52	21	14, 15		
<i>C. v. kolichisi</i> Alor I.	♂(1)	49	16	10.5	2.8	46 } NB	22	15	120	8.2
	♀(1)	45	15	11.5	3.3	36 } worn	23	15	110	8
	♂(4)	48-49	14-15	9.5-11.0	2.8-2.9	-	21-24	13-15	-	9.4-11

## DISCUSSION

Field observations were limited due to the secretive behaviour of the birds, but some general aspects of behaviour and call were noted. The birds were mostly seen moving through the dense undergrowth within about 1 m of the ground. They made short rodent like runs between one patch of scrub and another. The call of the adult birds was noted as a loud churring 'wee-er churr' (similar to Australian *Sericornis* spp). This may have been an alarm call rather than song. The juveniles made a high-pitched begging 'seep'.

Rozendaal (1987) postulated that further populations of the Bush-Warbler would be discovered at high altitudes on some of the Lesser Sunda Islands between Lombok and Timor. This has certainly proved correct, with populations recently discovered on Sumbawa and Alor. The taxonomic status of some populations of *vulcania* is however a little unclear. There is considerable geographic variation within *vulcania* ranging from the darkest populations on Sumatra, Java, Bali and Lombok to paler populations on Alor and Timor. This cline in coloration is probably largely due to climatic influences, the eastern populations being in a much drier climate. The timorese *everetti* occurs in the lowlands, whereas other populations of *vulcania* are montane, and the song of *everetti* also appears to be different to both the nominate race and *kolichisi*. In reviewing this group it was also noted that *everetti* and *kolichisi* specimens have narrower

tail feathers than nominate birds although the outer tail feathers of both adult *kolichisi* were worn. Further material and details of song are now needed to fully clarify the status of some of these populations.

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#### REFERENCES

- DELACOUR, J. 1942, 1943. The bush-warblers of the genera *Cettia* and *Bradypterus* with notes on allied genera and species. *Ibis* (6)14: 509-519; 85: 27-40.
- PETERS, J.L. 1986. *Check-list of birds of the World*, Vol. XI. Cambridge, Mass.: Mus. Comp. Zool.
- RENSCH, B. 1931. Die Vogelwelt von Lombok, Sumbawa und Flores. *Mitt. Zool. Mus. Berlin* 17: 451-637.
- ROZENDAAL, F.G. 1987. Description of a new species of bush warbler of the genus *Cettia* Bonaparte, 1834 (Aves: Sylviidae) from Yamdena, Tanimbar Islands, Indonesia. *Zool. Meded.* 61: 177-202.
- WELLS, D.R. 1982. Biological species limits in the *Cettia fortipes* complex. *Bull. Br. Orn. Cl.* 102: 57-62.